CENTER FOR CELL SIGNALING

CENTER

The Center for Cell Signaling (CCS) was established in 1997. CCS aims to identify new therapeutic targets and new drug candidates for asthma, allergy, inflammation, and cancer. Each of these diseases arises because cells are communicating the wrong information, which can be fixed by disrupting incorrect messages and providing correct signals. With over $6 million in annual external support, 14 University of Utah faculty researchers from eight different departments on campus combine their talents in a synergistic way to create and commercialize new technologies.

TECHNOLOGY

The CCS technologies focus on the synthesis and drug applications of new molecules involved in cell-cell communication, from controlling the biochemical pathways of signal transduction to designing instruments used to study these processes. One recent development is the identification of a new tumor suppressor that is critical to cell adhesion, which when mutated leads to metastasis. Second, investigating the human genome with DNA micro-arrays has identified new drug targets. Third, development of automated high-throughput screening methods improves the rate of finding new drug candidates.

ACCOMPLISHMENTS

The CCS has filed 24 invention disclosures. **A new company has been spun-off, Echelon Research Laboratories.** The company markets reagents and kits for identifying oncogene activators and suppressors important in cancer diagnosis. Collaboration between CCS and Echelon Research Laboratories has resulted in two STTR awards from the National Institutes of Health. The figure on the right exemplifies the founding technology for Echelon Research Laboratories, the first CCS spin-off company.

CONTACT

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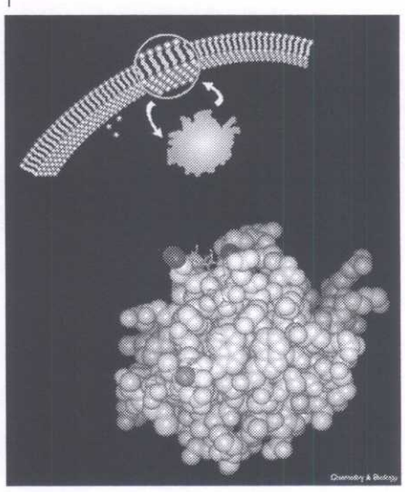
Can You Imagine...

. . . a new class of pharmaceuticals that provide therapeutic effects by artificially signaling selected cells in the body to perform desired actions to the benefit of the patient?

THE CENTER DEVELOPS AND COMMERCIALIZES NEW TECHNOLOGIES FOCUSED ON THE TREATMENT OF CANCER, ALLERGY, ASTHMA AND INFLAMMATION.



■ Image was on the front cover of *Chemistry and Biology* and illustrates the recognition of a signaling lipid ($PtdInsP_2$) in a cell membrane by a protein (profilin) in the cytosol that controls the reorganization of the actin cytoskeleton during cell replication, growth, movement, and adhesion. It is from the paper A. Chaudhary, J. Chen, Q.-M. Gu, W. Witke, D.J. Kwiatkowski, and G.D. Prestwich, "Probing the Phosphoinositide 4,5-bisphosphate Binding Site of Human Profilin 1," *Chemistry and Biology*, Vol. 5, 273-281 (1998).